

Determinants of divestiture choice in South Africa

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## Abstract

This research report investigates the determinants of divestiture choice in South Africa. In addition, it examines how the determinants are influenced by the period studied. There are three periods of interest, being the full sample period, the pre-financial crisis period and the post financial crisis period. The determinants of divestiture choice have not been investigated from a South African perspective by prior studies. This report therefore contributes to the literature by exploring a new context. The South African context is unique because of differing laws and regulations as well as socio-economic factors specific to countries in developing markets. This report makes a further contribution by updating the literature on determinants of divestiture choice as post financial crisis data is included in the data set.

The research is based on a sample of 102 divestiture transactions (78 spin-offs and 24 sell-offs) over the period 1998 to 2017. Logistic regression is used to ascertain the determinants of divestiture choice using pre-divestiture data of the parent company. The results show that financial performance as measured by return on equity (ROE) and liquidity as measured by the current ratio are significant determinants of divestiture choice over the full sample period (1998 to 2017). The higher the firm's financial performance, the higher the likelihood of divestiture through spin-off. Contrary to expectation, it was found that the higher the liquidity of the firm, the higher the likelihood of divestiture through sell-off. Financial distress, director ownership, Broad Based Black Economic Empowerment (BBBEE) and effective taxation rates are not found to be significant factors in determining divestiture choice over the entire period of study. Financial performance is found to be a significant determinant of divestiture choice over the pre-financial crisis period (1998 to 2006). The results for this period show that the higher the firm's financial performance, the higher the likelihood of divestiture through spin-off. The remaining factors are not found to be significant for the pre-financial crisis period. No factors were found to be significant over the post financial crisis period (2009 to 2017). These findings imply that determinants of divestiture choice are not uniform for South Africa and the United States; nor for differing time periods in the South African context. This implies that divestiture determinants vary depending on the context and the economic cycle studied.

Declaration

I, Davy Siame, hereby declare that the work on which this dissertation is based is my own original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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I thank God for making this submission possible. I thank my supervisor for being available for consultations and my friends and family for their motivation and moral support.

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## 1. Introduction

### 1.1. Background to the study

A divestiture<sup>1</sup> is the sale of a subsidiary or a division of a company to a third party, or the restructuring of a company such that where there was formerly only one company before the divestiture, afterwards there are two or more (Han & Qiu, 2012). Divestiture may be used to create a company whose business model and operations are easier to understand and value (Bergh, Johnson & DeWitt, 2008). Divestiture may also be used to reduce negative synergies caused by having many unrelated business units (Han & Qiu, 2012). There are several forms that divestiture can take, including spin-offs, sell-offs and carve-outs. In this research, two of the most common divestiture types will be investigated, namely sell-offs and spin-offs. A spin-off entails the divestiture of shares in a subsidiary or division to shareholders, while a sell off involves the sale of assets in a subsidiary or division for cash or other assets. Both types of divestiture involve a firm totally relinquishing control of an asset or group of assets that make up a division or subsidiary (Prezas & Simonyan, 2015).

Divestiture is a topic that is generally interesting to pursue as divestiture activity has been on the rise over the past few years. As a result of financial crises and corporate scandals, there is a greater degree of investor pessimism and scepticism with regards to the reliability and faithful representation of company's financial reports and results. Investors are far less likely now, more than ever, to invest in companies that they are unable to assign a value to with some degree of confidence. The financial statements of highly complex firms are easier to manipulate and are more prone to have errors because of the specialised skills required to prepare them. Divestiture offers stakeholders a clearer view of the company's core operations and performance. Divestiture or de-conglomeration gained traction in America in the 1980s (Steiner, 1997). Diversified companies such as General Mills, Northwest Industries, Beatrice Foods and ITT were underperforming from a share price perspective while their smaller, specialized counterparts were thriving (Stern, Stewart & Chew, 1995). The late 1980s saw a decline in company diversification levels (Steiner, 1997).

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<sup>1</sup> For the purposes of this paper, the word divestiture will be used to refer to spin-offs and sell-offs.



New companies were more focused, with fewer unrelated divisions, while older companies undertook divestiture to improve focus (Steiner, 1997). The number of industries that companies operated in decreased, while the number of companies operating in only one industry increased, by 14 and 54 percent respectively (Steiner, 1997). This contrasted with the large conglomerate structure that had been favoured in prior years. Conglomerates had been popular in years prior as it had been widely accepted that the value of larger, combined companies was greater than the value of the company's individual components. This assumption was being rebutted by the evidence emerging from the performance of conglomerates in contrast to their smaller counterparts. While divestitures have resulted in improved share performance, acquisitions have resulted in a decline in share performance for the acquiring firm (King et al, 2004). More recently, companies such as Abbott, Motorola and HP have been pressured by shareholders to improve financial performance by divesting (Bergh & Sharp, 2015). In 2011, Pepsi considered separating its snack and beverage businesses, to improve its share price (Bergh & Sharp, 2015). Despite pressure to divest, the divestiture is yet to occur, but remains under consideration. Similar divestiture activity has been noted in South Africa.

In South Africa, divestiture intensified in the years leading up to the end of apartheid. Foreign firms embarked on divestment as a method to apply pressure on the South African government to reform (Kaempfer, Lehman & Lowenberg, 1987). In 1992, the Anglo-American Corporation, Remgro, Sanlam, Old Mutual, Liberty Life and Anglovaal's combined market capitalisation accounted for more than 80 per cent of the JSE's total market capitalisation (Rossouw, 1997). Firms had limited expansion options due to sanctions and therefore made use of diversification to grow (Rossouw, 1997). However, the economic landscape has changed vastly since then; the lifting of sanctions has allowed firms to pursue alternative mechanisms to grow. Diversification declined, and divestiture activity has become a core part of company's strategic plans (Bergh & Sharp, 2015). Factors that have affected the incidence of divestiture in the past few years include competition regulation and BBBEE.

Competition regulation led to single firm domination of an industry being clamped down on, resulting in companies having to unbundle certain subsidiaries and/or divisions, particularly when pursuing mergers. Examples of this follow in section 3.4, specifically relating to cases involving Kansai Paints and Freeworld Coatings as

well as Mercanto Investments and Johnnic Holdings whereby divestiture was requested by the commission before merger activity could occur.

BBBEE is used as a method to redistribute wealth to the previously disadvantaged, with divestiture being a vehicle through which this objective can be achieved. For example, Naspers stated that unlocking value for the Phuthuma Nathi BBBEE scheme is part of the reason for its proposed divestiture of Multichoice. Many corporates indicate the need to increase focus as well as the desire to realize the true market of the company as reasons for divestiture. Old Mutual carried out the divestiture of certain business units in 2018. Old mutual listed two entities, Old Mutual Limited and Quilter, and distributed its Nedbank shares to shareholders, reducing its shareholding in the company to 19.9 percent. This divestiture was expected to unlock value for shareholders. Naspers recently announced that it intends to unbundle its interest in MultiChoice to shareholders. MultiChoice will be listed as a separate entity on the JSE once this divestiture is completed. The divestiture aims to unlock value for shareholders, including those participating in its BBBEE scheme as previously mentioned. This paper will aid in understanding such divestitures and the characteristics that lead to companies choosing to divest through sell-offs or spin-offs.

## **1.2. Problem statement**

This report aims to address the lack of research on the determinants of divestiture choice in South Africa. South Africa is unique in terms of its business and socio-political environment. Understanding the determinants of divestiture choice is important to ascertain the impact of these decisions on the value of businesses. Most prior studies on the drivers for divestiture and the determinants of divestiture choice focused on developed countries, specifically the United States. A number of these studies are detailed in the paragraphs that follow. The sample period for these studies ranges from 1969 to 2006. Steiner (1997) studied factors that led to diversified firms choosing to sell-off assets using a sample of 73 sell-off and 73 non-sell-off firms from 1986 to 1988. Steiner (1997) found firm performance and director ownership to be negatively related to the sell-off decision, while financial distress and the number of business segments are positively related to the sell-off decision. Maydew, Schipper and Vincent (1999), using a sample of 218 sell-offs and 52 spin-offs studied the impact of taxes on the choice of divestiture. Their study found that firms choose to divest using sell-offs rather than spin-offs despite

the higher tax costs associated with sell-offs, as the acquisition premium on sales exceeds avoidable tax costs. Bergh and Sharp (2015), using a sample of 83 spin-offs and 122 sell-offs from 1990 to 1999 studied the influence of outside block holders (external owners of more than 5% a company's shares) on divestiture choice. They find that spin-off is preferred where the divested unit is larger and the block holders hold a larger proportion of the divesting company. Khan and Metha (1996), using a sample of 86 spin-offs and 218 sell-offs from 1969 to 1987) found firms with low growth and stable earnings to be more likely to divest through sell-off. Nixon, Roenfeldt and Sicherman (2000), using a sample of 44 spin-offs and 84 sell-offs from 1988 to 1993 found that a sell-off is more likely than a spin-off when firms are financially distressed. Prezas and Simonyan (2015) with a sample of 322 spin-offs and 3280 sell-offs from 1980 to 2006, studied characteristics of firms that affect the decision on whether to spin-off or sell-off assets. They found that firms with higher marginal tax rates are more likely to spin-off their assets, to save on tax.

Prior studies are outdated as they range from 1996 to 2015 in terms of year of publication and 1969 to 2006 in terms of the sample tested. No study was identified that focuses on recent activity in the world of divestitures, particularly, no analysis was found including data in the years post the financial crisis of 2008. It is important to extend the sample period to include the financial crisis (and beyond) as such crises impact on the availability of capital both in the debt and equity market. The debt market is impacted as banks need to keep higher levels of capital in reserve. The equity market is impacted as investor pessimism leads to them opting for safer investments such as bonds and cash. This may lead firms to divest as they are forced to alter their levels of financial leverage and size based on the availability of capital. Laws and regulations also change over time in general, with the pace of change accelerated in times of crisis. In South Africa, for instance, over the past twenty years, corporate governance codes have changed with the King Code having been updated four times. Tax laws have likewise been updated, with dividends tax replacing secondary tax on companies as well as capital gains tax being implemented. BBBEE has been implemented to empower the previously disadvantaged. The period studied incorporates different economic periods, including periods of expansion, recession and recovery, allowing one to ascertain whether determinants of divestiture are uniform over different economic cycles.

Emerging markets are important to the global economy, yet limited research was found in the arena of divestiture determinants in this context. Papers based on the South African context did not study determinants of divestiture choice but covered other aspects such as the effect of unbundling<sup>2</sup> on JSE listed entities share prices and the tax impact of unbundling. South Africa was ignored in prior papers on determinants of divestiture choice, yet it is unique and differs to the United States in the following ways:

- The office of CEO and Chairman of firms are required to be kept separate in accordance with King III, negating this as a divestiture determinant.
- Tax rates for capital gains differ to those for income tax.
- There are differences in unbundling legislation between the two countries.
- BBBEE has a wider scope as the majority of South Africans fall into the previously disadvantaged group that BBBEE seeks to empower.
- IFRS is used as opposed to U.S. GAAP, with differing treatments for certain divestiture types.

### **1.3. Research aims, objectives and questions**

The aim of this paper is to study the determinants of divestiture choice in a South African context over the period from 1998 to 2017.

The objective of the paper is to perform a regression of a set of potential determinants of divestiture choice (as informed by literature) for the pre, during and post financial crisis periods as well as for the entire period of the study, being 1998 to 2017.

The paper seeks to answer the following research questions:

- a) What are the factors that are associated with spin-offs as a form of divestiture?
- b) What are the factors that are associated with sell-offs as a form of divestiture?
- c) Do these associations differ for the periods pre and post the financial crisis of 2008?

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<sup>2</sup> References to unbundling refer to all forms of unbundling, including spin-offs, sell-offs and carve-outs.

#### **1.4. Contribution to current knowledge**

This paper will contribute to current knowledge on determinants of divestiture choice by dealing specifically with the South African context. Prior papers did not explore South Africa, but instead focused on the American context. South Africa differs to the United States in terms of its use of IFRS as opposed to U.S. GAAP, BBBEE regulation, taxation structures and unbundling legislation. Having a knowledge of the determinants of divestiture choice in South Africa will assist in understanding and analysing divestiture activity by South African companies. This paper updates the literature on determinants of divestiture choice, incorporating multiple stages of the economic cycle, in the context of South Africa, an emerging market. The study focuses on a more recent period compared to prior studies which covered the period 1969 to 2006. Studies have not previously looked at divestiture post the financial crisis. As aforementioned, financial crises impact on the behaviour of firms and laws and regulations change over time. It is important to update the literature to account for these factors.

The findings of the study confirm the findings of prior studies for performance, while findings for the remaining variables are not in accordance with prior literature. The study shows that performance as measured by ROE, as well as liquidity, measured in terms of the current ratio, are significant factors in determining the choice of divestiture. ROE is positively related to the spin-off decision, while more liquid companies are more likely to pursue divestiture through sell-off, contrary to expectation. The effective tax rate, director's shareholding, financial distress and BBBEE are not found to be a significant determinant of divestiture choice, with a limited number of divestitures undertaken for the purpose of BBBEE. Although reasons for divestiture in general are mentioned, this study does not explicitly test reasons for divestiture in general. The study looks at divestiture over specific time periods; differing periods may produce different results.

#### **1.5. Structure of the report**

The remainder of this report will be structured as follows:

Section 2 examines the South African context, to ascertain why it is indeed unique (in comparison to developed nations) as proposed and possible reasons why the motivations behind divestiture may differ in SA compared to other countries.

Section 3 contains the literature review, in which prior literature related to determinants of divestiture choice is analysed. Most of these papers focus on an American context. The analysis will be done in terms of the hypotheses presented, the main findings of the papers and the applicability of these papers to the South African context.

In section 4, the data and sample chosen for this report are detailed and explained. This is driven by the findings in prior sections, particularly section 3.

Section 5 follows with the methodology to be used to test the hypotheses.

In section 6, the descriptive statistics and the results of the tests run on the data are presented.

In section 7, a conclusion is made with regards to whether to accept the hypotheses presented. Findings from the tests run are detailed.

Section 8 contains recommendations for future research which may be of interest to those who intend on carrying out similar studies and expanding on this body of work.

In section 9, the full bibliography is listed for all papers quoted and consulted in the process of research.

## **2. The South African Institutional Context**

### **2.1. Introduction**

This paper focuses on the South African context. The study of a specific context results in a paper that is not influenced by institutional differences between countries (King et al, 2015). This section seeks to show the unique nature of South Africa when compared to the United States. Most prior studies focused on the U.S. context thus it was considered an appropriate context against which to benchmark South Africa. This section explores corporate governance, laws and regulations as well as financial performance and position. It aims to show why South Africa is important from a global perspective. Laws and regulations related to the operations of companies in South Africa differ from those found in America. These differences may result in new determinants of divestiture choice being identified in the South African context. Previously studied determinants may not be relevant or significant in this context. In the paragraphs that follow, we look specifically at the

Johannesburg Stock Exchange (JSE), corporate governance, financial reporting and unbundling law and taxes.

## **2.2. The South African stock exchange**

South Africa is said to have one of the best functioning stock exchanges in Africa and a large degree of quality information is available for listed companies through the JSE (Johannesburg Stock Exchange, 2018). The availability of information makes the analysis of divestitures possible. The JSE is one of the twenty largest stock exchanges in the world (Johannesburg Stock Exchange, 2018). However, the size of the JSE in terms of the number of companies means that number of divestitures undertaken over any specific period will be far fewer than the stock exchanges of developed nations. Founded in 1887, it now has about 400 companies listed across the Main Board and AltX and is the largest in Africa (Johannesburg Stock Exchange, 2018). By comparison, the Nasdaq (the second largest American Stock Exchange) had more than 3000 companies listed on it as of 2017 (Desjardins, 2017).

South Africa is particularly important on the global scene; it is a member of the G20 (Group of twenty) as well as BRICS (Brazil, Russia, India, China and South Africa). The G20 and BRICS promote as well as aim for international financial stability and host summits and forums in which policies to achieve these goals are explored. The G20 consists of the world's biggest economies while BRICS are a grouping of the major emerging economies. Based on these factors, South Africa is an ideal developing market context in which to carry out a study of the determinants of divestiture choice. Carrying out this research is of value given the importance and prominence of South Africa in the global economy.

Each country has specific laws and regulations. The laws and regulations in South Africa of relevance to divestiture follow below and will provide insight as to why South Africa is unique.

## **2.3. Corporate Governance**

In South Africa, publicly traded companies must apply the King III code for Corporate Governance (updated to the King IV code for 2018 financial years) and follow the Companies Act of 2008. In the United States, one of the countries for which there is the most literature on divestiture, the different states have unique corporate codes, but there are standards that all states must abide by. These standards are found under the umbrella of Federal Law, which include the

Securities Act of 1933, the Securities and Exchange Act of 1934, and the Sarbanes-Oxley Act (also known as the Public Company Accounting Reform and Investor Protection Act of 2002) to name a few. The Sarbanes-Oxley Act deals with corporate governance, and follows a comply or else approach, which entails companies being punished for failing to abide by the terms of the act. This differs from King III which has an 'apply or explain' approach. This is more flexible and entails companies either following the law or disclosing why they have chosen not to. Instances of non-compliance can be detailed in the form of a checklist in the company's integrated report. King IV has an 'apply and explain' approach, which will require application and explanation of the details surrounding the application of each principle.

The King III code states that the office of CEO and Chairman should be held by separate persons. This contrasts with the Code of Corporate for Listed Companies and Federal Law, which do not have this requirement. Keeping the positions of CEO and Chairman separate has several advantages, the main one being that it prevents a situation whereby a large degree of power rests with any individual. In prior papers, one of the determinants of divestiture choice relates to the office of CEO and Chairman being separate. This is thus not an appropriate determinant in the South African context, as this separation is expected.

Corporate governance and financial reporting are interlinked, and thus it is essential to explore the differences in financial reporting standards between the countries of interest. Detail of financial reporting differences between South Africa and the U.S. follow below.

## **2.4. Financial Reporting**

The reporting of transactions (such as a divestiture) has an impact on how they are understood as the reporting of information affects how it is interpreted. International Financial Reporting Standards (IFRS) are used in many countries, including South Africa. The major global capital markets that do not make use of IFRS are the United States, Japan, India and China. In the U.S., United States Generally Accepted Accounting Principles are the accounting standards used. The key differences between IFRS and U.S. GAAP that are relevant with regards to divestiture are outlined below.

Differences between IFRS and U.S. GAAP:



- Under IFRS, pro rata spin-offs are typically reported using fair value accounting, and the relevant gain or loss is recognised in profit or loss (KPMG, 2015). Non-pro rata spin-offs are reported in the same manner as loss of control transactions, where the relevant gain or loss is recognised in profit or loss (KPMG, 2015). Under U.S. GAAP, pro rata spin-offs are reported using book values and there is therefore no gain or loss recognised. Non-pro rata spin-offs are reported on the same basis as IFRS (using fair value with the relevant gain or loss recognised in profit or loss).
- Under IFRS, transferors may, in common control transactions that are divestitures, make use of book or fair value to account for these divestitures in their consolidated financial statements (KPMG, 2017). Under U.S. GAAP, transferors in such common control transactions must apply book value accounting in their consolidated financial statements.

The different treatment of divestitures for accounting purposes may result in dissimilar divestiture choices in the two countries. For example, all things equal, where there are two separate entities with similar circumstances in the two countries, the entity in South Africa will be more inclined to undertake a pro rata spin-off of a business unit, as opposed to other forms of divestiture, than the entity in the United States, where the fair value of the unit is significantly larger than the book value. This is due to the fact that the transaction would have a favourable impact on profitability for the South African firm. The same logic is applicable to divestiture under common control transactions.

Despite these differences between the two standards noted, there is a drive towards the convergence of accounting standards globally, and in years to come the differences in accounting standards between participating countries will be reduced drastically. This will lead to better comparability of global financial statements which will lead to more uniform comparison of business transactions, such as divestitures. Legislation applicable to unbundling follows below.

## **2.5. Unbundling legislation**

Unbundling legislation applies in the case of certain divestitures and impacts on the taxability of these divestitures. Section 46 of the South African Income Tax Act deals with unbundling transactions. Section 46(1) defines an unbundling transaction as a transaction whereby the equity shares in a company (unbundled company) which is resident that are held by another company (unbundling

company) which is resident, are all distributed by the unbundling company to any shareholder of that unbundling company, according to the effective interest of the shareholders in the shares of that unbundling company (Income Tax Act, 2016). The equity shares (of the unbundled company) must all be listed or become listed within 12 months of the unbundling; the distribution must be made pursuant to an order made by the Competition Tribunal or Competition Appeal Court, or the shareholder to which the distribution is made must form part of the same group of companies as the unbundling company (Income Tax Act, 2016). Where the unbundled company is unlisted immediately before the distribution, the unbundling company must hold a controlling stake (more than 50%) in the equity of the unbundled company (Blew, 2015). In instances where the unbundled company is listed, the unbundling company must either hold an equity stake of greater than 35% in the unbundled company, or an equity stake of greater than 25% in the unbundled company where there is no other shareholder with a greater equity stake in the unbundled company than the unbundling company (Blew, 2015). In instances where the company being unbundled is foreign and the unbundling company's shareholder is a South African resident, the two companies must form part of the same group of companies (Blew, 2015). In cases where the shareholder of the unbundling company is not a South African resident, the unbundled company must be a controlled foreign company (CFC) in relation to a South African resident and that resident must form part of the same group of companies as the unbundling company (Blew, 2015). In each case, the unbundling company must have a minimum equity share of 50% in the unbundled company and the equity shares must be held as capital assets (Blew, 2015).

If the requirements of s46(1) are met, the unbundling company disregards the distribution for the purposes of determining its taxable income or assessed loss or net income (as per s9D) (Income Tax Act, 2016). Shareholders acquiring equity shares from this distribution must allocate a portion (based on the sum of unbundled and unbundling shares market values as at the end of the day of the transaction) of the expenditure and market value attributable to equity shares held in the unbundling company to the unbundled shares (Income Tax Act, 2016). The unbundled shares are deemed to have been acquired for the same purpose as the unbundling shares were held (as trading stock or a capital asset), on the same day and expenditure is deemed to have been incurred on the same date as it was incurred for the unbundling shares (Income Tax Act, 2016). Contributed tax capital

for both companies is determined in relation to the contributed tax capital of the unbundling company, apportioned in relation to the market value of each company in comparison to the sum of their market values (Income Tax Act, 2016). Additionally, the contributed tax capital of the unbundled company is increased by the proportion of its contributed tax capital that relates to shares held by persons other than the unbundling company (Income Tax Act, 2016). The distribution must be disregarded for the purposes of determining any liability for dividends tax. S46 does not apply where the unbundling company is a REIT or a subsidiary of a REIT, or more than 20% of shares are held by a disqualified person after the unbundling, or in certain instances where the unbundling company is not listed. Similar legislation on unbundling is found in the United States.

In the US, spin-offs must meet the conditions of section 355 of the IRS code to be tax free. Specifically, the unbundling firm must own a minimum of 80% of the asset before the divestiture and must distribute at minimum of 80% of the interest in the divested asset to its shareholders (Prezas & Simonyan, 2015). The transaction should not be used to avoid taxation; it should be identified as mainly for conducting a business transaction (Prezas & Simonyan, 2015). Additionally, after the divestiture, shareholders must continue to hold a significant portion of shares in the unbundling company and the company that has been unbundled (Prezas & Simonyan, 2015). The unbundling company and the unbundled company are required to maintain operation in the same line of business they had been involved in, in the five years before the divestiture occurred (Prezas & Simonyan, 2015). If these conditions are not met, the parent (unbundling) company may be liable to pay tax on the gains generated because of the divestiture (Prezas & Simonyan, 2015).

Thus, although spin-offs in both countries may be tax free, the specific circumstances under which they are tax free differ due to the conditions that need to be met for the spin-offs to qualify for this treatment.

Linked to unbundling legislation, the tax rates applicable to the different forms of divestiture are explored next.

## **2.6. Taxes**

Tax is one of the explanatory variables that is hypothesized to have an influence on divestiture choice. It is hypothesized that the higher a company's effective tax

rate, the more likely it is to divest through spin-off. Taxes vary from country to country, in terms of rates applicable for different persons (juristic and natural), and the ways in which different classes of transactions are classified (capital or revenue). South African companies are currently taxed at 28% and 22.4% (formerly 18.67%, until the 2017 tax year) for income and capital items respectively. Companies in the United States are charged income tax at rates between 15% and 35% depending on taxable income, however, after considering state and local government taxes as well as deductions, tax may reach as much as 40% in the highest bracket (KPMG, 2017; Deloitte, 2016). There is no special rate/inclusion rate for capital gains. Capital gains are taxed at the same rate as other income.

The dividend tax rate in South Africa is currently 20% (formerly 15% before 22 February 2017). It is a tax on shareholders which is withheld from their dividend payment when they receive dividends (Income Tax Act, 2016). Dividends tax replaced secondary tax on companies (STC) in 2012. STC was in place from 1993 and was governed by s34(1) of the Income Tax Act. The STC rate was 15%. In the case of dividends tax, the recipient of the dividend is liable for the tax, while the company paying the dividend was liable under STC (Income Tax Act, 2016). However, in the case of a distribution in specie, the company is liable for dividends tax. Exemptions and reductions are available to some receivers of dividends, unlike with STC, where the company was taxed in full for both cash dividends and dividends in specie (Income Tax Act, 2016).

In the United States, dividends are taxed based on whether they are ordinary dividends or qualified dividends and the rate varies in accordance with the rate of income tax. Qualified dividends are dividends paid by a U.S. firm or by a company with specified links to the U.S, where shares are held for longer than 60 days (90 days for preference shares) in the 121-day period beginning 60 days before the ex-dividend date. Ordinary dividends are taxed between 10% and 39.6%, while qualified dividends are taxed between 0% and 20%. Shareholders are liable for dividends tax. For share dividends (in the case of a spin-off), tax may be paid by shareholders on the fair market value of shares received. The parent company may pay tax on the spun-off shares, based on the realised gain.

As noted in the Unbundling Legislation section, capital gains tax as well as dividends tax are disregarded in the case of the transaction qualifying as an

unbundling transaction. Therefore, there are instances in which spin-off transactions will have no tax consequences in South Africa. Similar laws apply in the U.S. Tax rates impact on divestiture as low tax rates may result in companies being indifferent between divesting through spin-off or sell-off, whereas higher tax rates will result in companies preferring spin-offs (where spin-offs are tax free and sell-offs are taxed).

Unique to South Africa are Apartheid and Broad Based Black Economic Empowerment. These two phenomena are explored next.

## **2.7. The Apartheid era**

### **2.7.1. Apartheid**

The institutional environment in which a company finds itself and its corporate structure are interlinked (King et al, 2015). Government policy is a key aspect of the institutional environment in which corporates operate (Porter, 1980). This is because these policies will affect the competitive landscape, which in turn directly impacts on firm value (Porter, 1980). Both pre and post-apartheid, the environment firms have operated in has impacted upon South African firm's corporate structure (King et al, 2015).

The apartheid era spanned over 40 years, from 1948 to the 1990s. It had and continues to have (through its effects) a significant influence on business. This is due to its impact on the employment criteria used and the cost of various forms of labour, as well as the ability of companies to do business internationally. In the years leading up to 1994, companies were divesting from South African operations due to the negative impact of international economic sanctions in place against South Africa on their profitability. These sanctions restricted South African firm's access to capital and other valuable resources (King et al, 2015). This, however, led to reduced competition, due to a lack of access to international markets for both firms and investors. This allowed large South African firms to form, which held the lion's share of the local market (King et al, 2015). South African firms operated in limited industries and ownership of these companies was highly concentrated (Chabane, Goldstein & Roberts, 2006).

In the year 1992, 98 per cent of the South African beer market was held by South African Breweries (SAB) (Rossouw, 1997). Six companies (Anglo American

Corporation, Remgro, Sanlam, Old Mutual, Liberty Life and Anglovaal) had a market capitalisation which equated to more than 80 per cent of the JSE's total market capitalisation (Rossouw, 1997). Diversification was used as a growth mechanism in the times of exchange controls and economic sanctions (Rossouw, 1997). Large conglomerates were formed during this period. Sanctions did not, however, impact substantially on South African company's expansion of their international operations (Chabane, Goldstein & Roberts, 2006). For example, assets equivalent to a third of the Anglo-American Corporation's total assets were held through Mincoro (a Luxemburg registered company) (Chabane, Goldstein & Roberts, 2006). The political instability resulted in South African firm's shares being perceived as riskier than their international counterparts, which led to them trading at lower prices (Chabane, Goldstein & Roberts, 2006). Over and above its impact on companies, the apartheid regime also substantially impacted on the lives of individuals in South Africa.

The apartheid system led to the white minority holding most resources. The black majority saw their economic participation and ownership rights severely limited. Apartheid resulted in high levels of inequality and concentrated ownership of the means of production in the hands of a few individuals. Social unrest, mass protest action and the actions of the international community eventually lead to the end of Apartheid.

### **2.7.2. The end of Apartheid**

The fall of Apartheid began in the early 90's and was concluded (politically) in 1994. The pressure on South Africa to reform was both in the private sphere, through companies divesting, as well as the public sphere, through sanctions (Kaempfer, Lehman & Lowenberg, 1987). This pressure was aimed at forcing reform through inducing economic hardship in South Africa (Kaempfer, Lehman & Lowenberg, 1987).

In 1994, economic inequality in South Africa was at high levels, and this inequality persisted in the years that followed. The end of apartheid was followed by the lifting of economic sanctions on South Africa, which opened the international market to South African firms (Rossouw, 1997). Foreign direct investment from Europe and the U.S. increased. The period post-apartheid has seen firms begin to unbundle and favour more focused, limited operations, as well as a change in firms' primary

listings from the JSE to other foreign stock exchanges (Chabane, Goldstein & Roberts, 2006). Divestment helped firms increase their focus as they adapted to their new institutional environment (Rossouw, 1997). Mimetic isomorphism explains the tendency of firms to adapt to changing environments in similar ways (Rossouw, 1997). Firms that undertook divestiture activity were often successful in improving their performance. Thus, the divestiture activity that began post 1994 became more common in the years that followed. In addition, competition related regulation informed divestiture activity (Chabane, Goldstein & Roberts, 2006). A few large conglomerates still remained in the early 2000's (Chabane, Goldstein & Roberts, 2006). Their size, however, declined in relation to the overall market (the JSE). This decline was because of factors including an increase in foreign firms, divestiture and State-Owned Entities choosing to list (Chabane, Goldstein & Roberts, 2006).

The effects of apartheid are important to consider due to the enactment of redistributive policies to counter act apartheid and their impact on businesses divestiture choice. To counter act the effect of apartheid and redistribute wealth, the BBBEE Act of 2003 was promulgated. BBBEE is one of the major legislative actions taken to reduce inequality and increase the participation of black individuals in the economy.

### **2.7.3. Post- apartheid era**

BBBEE is described in more detail, as it is a key hypothesized determinant of divestiture choice and thus important to understand in depth for the purposes of this study. BBBEE is a possible determinant of divestiture choice as divestiture can be used as a method of complying with the requirements of BBBEE, either by selling off subsidiaries/divisions to black individuals or distributing share in subsidiaries/divisions to these individuals. Post the fall of apartheid and the advent of democracy in 1994, South Africa has undergone social change, which has impacted not only individuals, but corporations as well (King et al, 2015). Government policies have been instituted over the past 20 years to combat the impact of apartheid. Companies have faced social pressure to reform and become more inclusive. The policies and programs have been put in place to redistribute wealth, including changes to fiscal and monetary policy, privatisation and affirmative action (Wolmarans & Sartorius, 2009). Specifically, trade liberalization,

competition policies and BBBEE have been implemented (Chabane, Goldstein & Roberts, 2006). Each is explored in the paragraphs that follow.

Trade liberalization (entailing the reduction of barriers to trade) and the relaxing of exchange controls have led to greater participation by South Africa in the global economy (Chabane, Goldstein & Roberts, 2006). Trade liberalisation was promoted on the basis on that it would reduce the cost of capital to South African firms (Chabane, Goldstein & Roberts, 2006).

Competition related policy is documented in the Competition Act, No. 89 of 1998. The Competition Commission, Competition Tribunal and Competition Appeal Court are constituted in terms of this Act. The Competition Commission performs investigations and enforces competition related law, while the Competition Tribunal adjudicates and the Competition Appeal Court is used for appeals against decisions made by the Tribunal (Competition Commission, 2016). Competition policies limit the ability of companies to form conglomerate structures. They affect divestiture as companies wishing to merge will need to divest certain divisions and/or subsidiaries where the merger would result in unfair restrictions on competition.

The BBBEE Act of 2003 was created with the aim of reducing inequality and combatting poverty. Broad Based Black Economic Empowerment is a wealth redistribution mechanism aimed at increasing the participation of black individuals in the economy, both in terms of management positions they hold and their ownership of companies (through holding equity in companies). BBBEE is a form of coercive isomorphism; regulation (The BBBEE Act of 2003) has driven South African companies to restructure (King et al, 2015). Companies are encouraged to score well on their BBBEE rating as this results in greater government support and preferential procurement. Companies may sell-off or spin-off parts of their business to black individuals to benefit from improved BBBEE scores.

## **2.8. Conclusion**

South Africa has a sophisticated, high quality financial system, allowing for studies to be performed. South Africa is also of importance to the global economy (due to its membership of the G20 and BRICS) and is as such an ideal context in which to perform studies. In summary, the South African context is unique in that the



accounting standards, taxes and corporate governance regulations differ from those found in the United States. Accounting for divestiture differs between the two countries in terms of the use of book or fair value accounting for pro rata spin-offs and divestitures under common control transactions. Rates of taxation for capital gains differ between the two countries. There is a requirement for the roles of CEO and Chairman to be separate in South Africa, which results in CEO-Charmain duality not being an applicable determinant. In addition, BBBEE laws and transactions are unique in terms of their size and scope in South Africa. Such transactions are relevant for divestiture as companies may seek to sell-off or spin-off parts of their business to black individuals to benefit from improved BBBEE scores. This study seeks to explore whether the characteristics of South Africa will result in determinants of divestiture that differ to those found in other contexts. The literature review section that follows explores determinants of divestiture choice as found in prior papers.

### **3. Literature review**

#### **3.1. Introduction**

In this section, literature that explores the phenomenon of divestiture, and more specifically, the determinants of divestiture choice, is analysed and evaluated. The two forms of divestiture that are the subject of this study, spin-offs and sell-offs, are explained and contrasted. Reasons for divestiture in general then follow. Finally, the determinants of divestiture choice are explored, and conclusions are made on which determinants will be tested as part of this study.

#### **3.2. Spin-offs and sell-offs**

A spin-off entails either setting up a new company, using the assets of a current division or business, in which shareholders of the parent company will receive shares, or distributing shares in an existing subsidiary to shareholders (Nixon, Roenfeldt & Sicherman, 2000). Both are done on a pro-rata basis, based on shareholding prior to the spin-off (Nixon, Roenfeldt & Sicherman, 2000). The size (in terms of indicators such as market capitalization and assets controlled) of the divesting company is reduced and the new company has independent operations which are no longer controlled by the parent company's managers (Nixon, Roenfeldt & Sicherman, 2000). After the spin-off, shareholders own shares in both the parent company and the subsidiary, whereas before they only held shares in

the parent (Bergh, Johnson & DeWitt, 2008). Spin-offs create more choices for investors, as they are able to choose between investing in the parent company or the subsidiary or both post spin-off. Investors are better able to allocate funds to specific businesses that they wish to invest in and be exposed to.

A sell off involves parent shareholders divesting of a subsidiary, division or assets to a third party (Nixon, Roenfeldt & Sicherman, 2000). Assets are typically exchanged for cash, although they may be exchanged for other assets. Typically, the assets obtained in exchange (usually cash) are more liquid than those given up, thus business liquidity is improved by sell-offs (Nixon, Roenfeldt & Sicherman, 2000). Sell-offs generate liquid assets whereas spin-offs do not; spin-offs simply move assets to a new company (the subsidiary) which may remain under the control of the parent company if not distributed to shareholders (Nixon, Roenfeldt & Sicherman, 2000). The size of the company may remain the same (as assets are merely exchanged), but the company managers lose ownership and control of the assets sold off (Nixon, Roenfeldt & Sicherman, 2000). Total assets under control of the parent management team are unchanged, assuming the assets are sold off for fair value (Han & Qiu, 2012). Shareholders only hold shares in the parent company, both before and after the sell-off which is in direct contrast to spin-offs. Sell-offs are done to refocus operations and bring the business back to its core offering (Nixon, Roenfeldt & Sicherman, 2000). The profitability of the divestiture is clearer in the case of a sell-off. Investors and other interested parties are able to directly observe the restructuring company's increased profitability resulting from the sell-off (Bergh, Johnson & DeWitt, 2008). This gain will be the proceeds from the sale, after deducting the relevant taxes (such as capital gains tax in South Africa). In the case of sell-offs, investors are reliant on managers using sale proceeds wisely, in a way that will maximise company value (Bergh & Sharp, 2015).

The key differences between the two forms of divestiture are summarised below:

- Cash is only exchanged in the case of a sell-off, a spin-off involves the transfer of shares.
- The size of the divesting company is reduced in the case of a spin-off while it will remain approximately the same in the case of a sell-off, assuming the asset/subsidiary is sold off for an amount close to its fair value.

- Investors remain invested in only one company post a sell-off, whereas they will own a share in two companies post spin-off.
- Taxation of the two forms of divestiture differ; sell-offs trigger capital gains consequences, whereas spin-offs trigger dividends tax (formerly STC) or may be tax free if specific criteria are met.

Divestiture activity is an important part of company's strategies to unlock value. Reasons for divestiture are outlined below.

### **3.3. Drivers of Divestitures**

Divestiture is done for the following reasons:

- Divestiture is a method used to reduce information asymmetry. It results in the creation of a company whose business model and operations are easier to understand and value, both for outsiders and internal management purposes (Bergh, Johnson & DeWitt, 2008). Information asymmetries exist between managers and parties (that are not insiders) interested in any firm as managers will tend to have more complete information about the firm. Outsiders are reliant, to a large extent, on information that managers give to them (Bergh, Johnson & DeWitt, 2008). Managers are in a position whereby they can manipulate earnings which exposes investors to risk (Bergh, Johnson & DeWitt, 2008).

One such instance of information asymmetry and management manipulation of earnings is the case of Enron. Enron was involved in various industries, including electricity, natural gas, communications and pulp and paper. The company concealed its true performance through accounting and finance manipulations. 'In November 2001, Enron restated its financials for the prior four years to consolidate partnership arrangements retroactively' (Healy & Palepu, 2003). 'Earnings from 1997 to 2000 declined by \$591 million, and debt for 2000 increased by \$658 million' (Healy & Palepu, 2003). Other instances include WorldCom, where assets were inflated by as much as \$11bn. In the case of Tyco, income was inflated by approximately \$500m and approximately \$150m was stolen by the CEO and CFO. In South Africa, at a company called Leisure Net, revenue was artificially inflated by booking earnings on long term contracts early. In the case of Leisure net, headline earnings of R114m for the year

ended 31 December 1999 were restated in 2001 to reflect a loss of R42.2m once the appropriate revenue recognition principle was applied.

Information asymmetries are likely to be greater where a firm is large and diversified (as in the instance of Enron). As a result, such firms will tend to trade at a discount to their true value as investors would have considered the possibility of management manipulation when evaluating the financial statements of the company (Bergh, Johnson & DeWitt, 2008). Steiner (1997) also concurs that firm diversification results in lower firm valuations. Information asymmetry can be reduced by divestiture, giving outsiders a better understanding of the business and this may contribute towards an improvement in the market valuation of these companies (Bergh, Johnson & DeWitt, 2008). 'Spin-offs reduce information asymmetries that arose in strategic control systems, transfer difficult-to-value assets to a capital market where they become pure play investments, and improve the transparency and efficiency of the restructuring company' (Bergh, Johnson & DeWitt, 2008: 137). Sell-offs may achieve a similar effect, as they reduce the complexity of firms where unrelated business units are sold.

- Divestiture may result in streamlining the business and reducing negative synergies caused by having several unrelated units in a diversified company (Han & Qiu, 2012). Diversified firms may have high administration and other overhead costs due to their complexity. Creating separate firms may reduce costs by improving efficiency, while selling off a division will directly reduce costs as there will simply be less resources consumed due to less demand for them from the new, smaller firm. Post divestiture, managers can spend their time and focus on a limited number of business segments. Kaplan and Weisbach (1992) studied 119 sell-off divestitures over the period 1971 to 1982 and found that 42% of the divestitures were carried out for strategic reasons or were related to a change in focus. Sadtler, Campbell and Koch (1997) studied 42 cases of divestiture in the U.S. and 20 cases in the UK and found that the need to have focused operations was the reason behind 30% of these divestitures.
- Divestiture (sell-offs) may be carried out simply because the purchasing firm offered a good price for the assets (Han & Qiu, 2012). If the value that

a firm can obtain through selling an asset is greater than the present value of all net cash inflows/cost savings it will receive using the asset, it would be financially beneficial for the firm to sell the asset. Per Kaplan and Weisbach (1992) 3% of companies indicated that the sell-off was driven by the fact that a good price was offered, for a sample of 119 divestitures over the period 1971 to 1982.

- Competition policies limit the ability of companies to form conglomerate structures. They affect divestiture as companies wishing to merge will need to divest certain divisions and/or subsidiaries where the merger would result in unfair restrictions on competition. For example, in South Africa, the Competition Commission found that the Kansai Paints and Freeworld Coatings merger would result in a reduction in competition in the automotive paint coatings market (Bowman Gilfillan, 2016). The market was described as ‘...concentrated with high barriers to entry and [there were] relationships between the various competitors via joint ventures’ (Bowman Gilfillan, 2016). One of the conditions imposed by the commission was that Freeworld divest of its automotive coatings business as well as its shareholding in the Freeworld/DuPont joint venture (Bowman Gilfillan, 2016). However, this condition was subsequently removed after negotiation with the Commission and approval by the Competition Tribunal (Bowman Gilfillan, 2016). It was decided that divestiture need not take place before the merger, if adequate steps are taken (Bowman Gilfillan, 2016). In the case of the merger of Mercanto Investments and Johnnic Holdings, businesses required to be divested (because of the merger) were held separately, with a trustee appointed to oversee these businesses while the divestiture was finalised (Bowman Gilfillan, 2016).
- Sell-offs may be done to prevent a hostile take- over (Steiner, 1997). If the acquiring company is looking to gain control of the target company to benefit from specific assets or a specific division, management may sell-off these assets to protect themselves from this threat (Steiner, 1997). Spin-offs can be performed to achieve the same effect; as sought-after assets/divisions can be spun-off. However, in some cases, divestiture is done to the detriment of shareholders. Such activity can be carried out by management merely for the purposes of preserving their positions, rather

than them doing what will add value to the company. Kaplan and Weisbach (1992) found takeover threats to be among the reasons for sell-off, for a sample of 119 divestitures over the period 1971 to 1982. Takeovers threats were the cause of 1% of divestitures in this case. Sadtler, Campbell and Koch (1997) identified takeovers as the reason for divestiture in 6% of the cases they studied.

The type of divestiture implemented should ideally be driven by its ability to meet the primary reason for undertaking the restructuring and to produce the highest possible returns in financial terms (Bergh, Johnson & DeWitt, 2008). The type of divestiture chosen will impact on future financial performance and thus managers must make informed choices (Bergh, Johnson & DeWitt, 2008). The choice between spin-offs and sell-offs is hypothesized to be driven by several determinants (in prior literature). These are explored below, and additional hypotheses deemed relevant in the South African case are included. The theory underlying the determinant is stated and the related findings stemming from prior literature are presented. Thereafter hypotheses are developed, and the nature of the hypotheses are detailed.

### **3.4. Determinants of divestiture choice**

The determinants of divestiture choice are those factors that impact on whether businesses, once they have chosen to divest, divest using spin-offs or sell-offs. These determinants have been developed by analysing those assessed in prior papers, as well as through research of the South African context. The determinants include financial performance and position, laws and regulations and management ownership.

#### **3.4.1. Financial performance and position**

The determinants that follow fall under the umbrella of financial performance and position, as they relate to income statement and balance sheet items and considerations that drive divestiture.

##### **3.4.1.1. Financial Distress and Liquidity**

Financial distress arises when liquid assets available at a point in time amount to less than the obligations due at that same point (John, 1993). One of the major costs of financial distress arises due to the need to trade illiquid assets for liquid

assets to meet obligations (John, 1993). Divestiture is used as a method of reducing or eliminating the negative effects of financial distress. A large body of research indicates that firms with high debt ratios are more likely to engage in divestiture. Nguyen and Rahman (2015) found that firms that choose to divest have higher financial leverage, which indicates that firms turn to divestiture when funding options are constrained. In a spin-off, no funds change hands in the form of cash or otherwise (Han & Qui, 2012). Sell-offs result in liquid assets being available to the firm, which can be used to meet its financial obligations immediately, thereby counteracting the effect of financial distress.

A sell-off is a way of raising capital for the remaining business units (Bergh, Johnson & DeWitt, 2008). The sale of assets decreases or eliminates the need for additional funding (Nguyen & Rahman, 2015). Cash from the sold off assets is re-allocated to those units that remain in accordance with their cash requirements. Competition for this cash by these other remaining units leads to a more efficient company (Bergh, Johnson & DeWitt, 2008). Kaplan and Weisbach (1992) found that 28% of companies indicated the need to finance future acquisitions as the reason for sell-off, for a sample of 119 divestitures over the period 1971 to 1982. Steiner (1997) found that high levels of long-term debt led to higher probability of sell-off. It must be noted, however, that Steiner compared the decision to sell-off assets to the decision to not divest and did not consider spin-offs. Nixon, Roenfeldt and Sicherman (2000), studying a sample of 128 divestitures over the period 1988 to 1993, found that sell off is more likely than spin-off in times of financial distress (measured with reference to the interest coverage ratio).

H1: A company that is experiencing financial distress (measured with reference to the interest coverage ratio) is more likely to divest through a sell-off of assets rather than a spin-off.

H2: A company with lower levels of liquidity (measured in terms of its current ratio) is more is more likely to divest through a sell-off of assets rather than a spin-off.

#### **3.4.1.2. Operating performance**

Sell-offs are more likely than spin-offs in the case of poor operating performance (Nixon, Roenfeldt, & Sicherman, 2000). Per Kaplan and Weisbach (1992), 21% of companies cited poor performance as the driver for sell-off, for a sample of 119 divestitures over the period 1971 to 1982. Spin-offs are preceded by periods of

strong market performance, whereas sell-offs are inversely related to corporate performance immediately preceding them (Nixon, Roenfeldt, & Sicherman, 2000). Michaely and Shaw (1995) and Bergh and Sharp (2015) have similar findings, using return on assets as a measure for performance. Steiner (1997) studies why companies choose to divest through sell-off or not to divest and finds that sell-off is more likely the lower the operating profit margin of the parent firm. John and Ofek (1995) studied a sample of sell-offs with a value greater than \$100 million, over the period 1986 to 1988 involving publicly traded U.S. firms. They found that sell-offs led to an increase in focus (for the divesting firm, as measured by the number of business segments) and an improvement in the performance of the remaining assets of these firms. Hillier, McColgan and Werema (2009) study the causes and consequences of selling off non-financial assets from 1993 to 2000 by non-financial firms in the UK. One of their findings is that UK firms significantly improve their operating returns following a sell-off divestiture (Hillier, McColgan & Werema 2009).

H3: Companies with strong operating performance, (measured with reference to return on equity), in the period leading up to the divestiture will divest through a spin-off.

#### **3.4.2. Laws and legislation**

There are laws and regulations that impact on the decision of whether to divest, and which specific divestiture to implement. The impact of tax laws and BBBEE (unique to South Africa) is detailed and explained in the paragraphs that follow. Taxes impact on the profitability of the different forms of divestiture. To comply with the requirements of BBBEE, companies may create spin-offs in which shares are given to black individuals. Detail on these forms of legislation follow below.

##### **3.4.2.1. Tax**

The tax treatment of spin-offs and sell-offs differ. Where a spin-off is carried out, receiving shares in the new subsidiary would constitute a dividend in specie. Dividend withholding tax will be payable by the company in terms of South African tax law (not the shareholders) (Income Tax Act, 1962). The dividend tax rate in South Africa is currently 20% (15% prior to 22 February 2017). The base cost of the shares will be set at the market value at the time they are given to shareholders,



which will be used to determine the shareholder's capital gains in future (capital gains tax is calculated as proceeds less base cost) (Income Tax Act, 1962).

As noted under the Unbundling Legislation heading of section 2, capital gains tax as well as dividends tax are disregarded in the case of the transaction qualifying as an unbundling transaction. Therefore, there are instances in which spin-off transactions will have no tax consequences.

In the United States, stock dividends may similarly be treated as tax-free transactions in some instances, because no funds change hands, nor are the subsidiaries assets valued (Prezas & Simonyan, 2015). The specific instances under which stock dividends are tax free are detailed under unbundling legislation in section 2.

Sell-offs have capital gains tax consequences, with tax payable at 22.4% (previously 18.65%:  $28\% \times 80\% = 22.4\%$ ,  $28\% \times 66.6\% = 18.65\%$ ). Capital Gains Tax in South Africa is governed by the Eighth Schedule of the South African Income Tax Act. The tax will be calculated on the proceeds less the base cost of the investment. Similarly, in the US, capital gains are levied upon the sale of a subsidiary. However, in the US, the capital gains tax rate and the corporate tax rate are equivalent, at 35%. In both a South African and an American context, if proceeds are less than base cost, a capital loss will be realized. The tax losses are set off against capital gains; no tax benefit can be realized from capital losses directly.

Maydew, Schipper and Vincent (1999) found that managers may still choose to sell-off assets where it is possible for a divestiture to be carried out through a tax-free spin-off, to gain earnings and cash flow benefits. Additionally, Maydew, Schipper and Vincent (1999) stated that sell-offs may be preferred to tax free spin-offs as the premium received on sell-off may exceed the tax cost that could have been avoided. Prezas and Simonyan (2015) studied a sample of 322 spin-offs and 3280 sell-offs over the period 1980 to 2006 and found that firms with higher marginal tax rates are more likely to spin-off their assets, to save on tax. In line with the view of Prezas and Simonyan (2015), it is concluded that in general, the higher a firm's effective tax rate, the more likely a divestiture through spin-off.

H4: Companies with high effective tax rates will prefer to divest through spin-offs.

### **3.4.2.2. Broad Based Black Economic Empowerment**

BBBEE has had a hand in increasing divestiture activity; BBBEE links directly to corporate structure as firms were incentivised to increase their BBBEE score by increasing the number of black individuals with ownership rights (Bhana, 2006). To comply with BBBEE ownership requirements, a company may perform spin-offs to have a separate company in which black individuals can own shares. Alternatively, a subsidiary or division may be sold off to black individuals. The sell-off will typically be at a discount to ensure that it is affordable to the purchasers.

Prior literature has not explored whether a sell-off or spin-off is preferred in carrying out BBBEE transactions. In this paper, it is proposed that spin-off will be preferred to sell-off for completing BBBEE transactions. Spin-off is preferred to sell-off in this case as spin-off results in the empowered company remaining within the control of the shareholders of the parent company, facilitating beneficial relationships between the two companies.

BBBEE is unique to South Africa and has not been explored as a determinant of divestiture choice. Thus, this paper will contribute to literature by analysing a new determinant.

H5: Companies make use of spin-offs rather than sell-offs to comply with the BBBEE requirements.

### **3.4.3. Ownership**

#### **3.4.3.1. Management ownership**

Agency theory is important to consider when analysing management motives for carrying out activities such as diversifying the firm or divesting from certain divisions or subsidiaries. Agency theory is used and quoted in a variety of fields. It is focused on conflicts of interest between groups of people, each of whom have different/conflicting interests in the same assets (Bergh & Sharp, 2008). Conflicts that occur in this context are typically between shareholders and managers of firms (Bergh & Sharp, 2008). The shareholders are principals, who essentially hire managers (the agents) through their votes at the relevant meeting to perform the task of managing the firm (Bergh & Sharp, 2008). Managers of firms are in control

of their diversification levels and they may not choose the level that results in optimal shareholder value creation as they have their own interests to protect.

Managers with low ownership interests are less invested in the business and its success. Where a spin-off is performed, they would obtain a likely insignificant number of shares in the subsidiary, whereas with a sell-off, they would have immediate and direct access to a substantial amount of cash. Managers who do not have any financial or other interest in the performance of a company are more prone to misuse proceeds from the sell-off of a division or subsidiary (Jensen, 1986). Therefore, the higher the percentage of managerial ownership in a company, the higher the probability of a spin-off relative to a sell-off (Jensen, 1986).

H6: The higher the degree of director ownership, the more likely a divestiture through a spin-off.

### **3.5. Conclusion**

Divestiture is a strategy which involves the restructuring of a company, which may be done to reduce information asymmetry and negative synergies resulting from diversification, as well as to alleviate financial pressure on the company, or prevent hostile takeovers. The two forms of divestiture of interest for this paper are spin-offs and sell-offs. Whereas sell-offs entail the transfer of cash, spin-offs simply involve the transfer of a business asset/unit to shareholders.

Financial distress, liquidity, financial performance, taxation and manager ownership are all determinants from prior studies that will be explored in this paper. Taxation structures differ in South Africa, which has unique rates applied for capital gains. BBEEE is unique to South Africa, and links directly to divestiture as companies are encouraged to increase the participation of black individuals to obtain preferential procurement of government projects amongst other benefits.

The timeframe of past papers spans from 1996 to 2015 in terms of year of publication. The data set used in the papers spans from 1980 to 2006. These papers were written before the global financial crisis of 2008. Thus, there is a need to update the literature.

## **4. Data and Sample**

This section details the data to be used in the regression analysis. This includes a discussion on where the sample was obtained from and how the sample was determined as well as the period to which the sample relates.

### **4.1. Period and context analysed**

Only companies that had engaged in divestiture activity in the period that is the subject of the study (1998 to 2017) were eligible for selection. The earliest paper included in the literature review is Khan and Metha (1996) and the latest is Bergh and Sharp (2015), with data sets used in the papers spanning from 1969 to 2006. The samples used in these studies therefore relate to periods before the global financial crisis of 2008. The period chosen for this study will allow for the impact of different economic cycles to be examined.

The pre-financial crisis and post financial crisis periods are separated to determine if the period analysed has an impact on the determinants of divestiture choice. Nichols et al (2014) identified the financial crisis as having taken place from 2008. Mishkin (2011) analyses the subprime global financial crisis to understand its implications. The financial crisis period is said to have lasted from 2007 to 2009 (Mishkin, 2011). Reinhart and Rogoff (2008), in their comparison of the U.S. subprime financial crisis to other financial crises, refer to the 2007 United States subprime crisis (implying a start date of 2007). Therefore, the period 2007 to 2008 is the financial crisis period used for the purposes of this study. Firstly, a full regression model will be run incorporating all the data. Thereafter, regression models will be run for the pre and post crisis periods. The crisis period is excluded from the analysis as there are too few data points in this period to run a regression (a total of 11 divestitures took place from 2007 to 2008).

This paper focuses on the South African context. Divestiture can, in this case, take one of two forms, spin-off or sell-off. As detailed in earlier sections, carve-outs are not included in the definition of divestiture as they do not involve the relinquishing of control. Only complete divestitures are explored, as they are expected to be driven by clearly identifiable motives. The data set was chosen based on whether information required was available for the divestiture. The focus was purely on divestitures involving JSE listed companies as they are required to disclose activities such as divestiture publicly. In addition, as the focus was on South Africa, only South African based companies were included.

## **4.2. Sampling criteria**

The final sample consists of 78 spin-offs and 24 sell-offs. A total of 312 cases of unbundling were reported over the period 1998 to 2017 per data from INET BFA. Only the latest divestiture by each firm in each financial year is considered. Companies determined to have engaged in forms of divestiture other than spin-offs and sell-offs as defined were excluded from the data set. Of the 312 initial cases of unbundling, 112 involved a company undertaking more than one unbundling in the same period. A further 98 were neither spin-offs nor sell-offs as defined, they related to instances whereby companies chose to sell or distribute to shareholders investments in entities over which they did not hold control (less than 50 percent of shares). This resulted in the total number of divestitures being 102, consisting of 78 spin-offs and 24 sell-offs.

## **4.3. Data sources**

To conclude on the form of divestiture, the SENS announcements of the relevant companies were obtained from sources including the website of the company and the company's 'fact sheet' on INET BFA.

The list of companies chosen for research were obtained from INET. INET provided a list of all companies that have carried out divestiture activity over the sample period but did not specify the nature of divestiture. SENS announcements and financial and integrated reports of the various companies involved were used to collect further data on the companies. The SENS announcements were used to determine the nature of the divestiture (spin-off or sell-off). All other types of divestiture were eliminated from the sample (carve-outs). In the case where a company carried out more than one divestiture during the same financial period, only the latest instance of divestiture was considered. The financial and integrated reports of the companies were used to obtain information on the financial performance, financial position and management shareholding of the companies.

## **4.4. Explanatory variables**

The explanatory variables to be used in this report include profitability as measured by return on equity (ROE), financial distress as measured by the interest coverage ratio, liquidity as measured by the current ratio, the effective tax rate, whether the divestiture relates to a BBBEE transaction and director shareholding. The most recent financial statements preceding the announcement of the divestiture activity

were used for each company. This was done to obtain the relevant data as these statements provide the most relevant information regarding the businesses' performance and position at the point when the decision to divest was undertaken. In South Africa, JSE listed companies are required to produce interim as well as year-end financial statements. Year-end financial statements were used. The method for measuring each explanatory variable is detailed below.

#### **4.4.1. Profitability**

The ROE was used as a proxy for profitability. The return on equity is calculated as net profit divided by equity. This ratio gives an indication of the strength of the company's financial performance. Nixon, Roenfeldt, and Sicherman (2000) made use of operating profit as a measure of performance. Michaely and Shaw (1995) and Bergh and Sharp (2015) made use of return on assets as a measure for performance. ROE and ROA are similar, but ROE considers only the equity holders, as opposed to the return to all contributors of capital. ROE thus looks at what is often considered as being the most important aspect of a business, the return to its shareholders.

#### **4.4.2. Financial distress and liquidity**

Financial distress is measured in terms of the interest coverage ratio, which is total earnings before interest and tax (EBIT) divided by interest expense, both per accounting records.

Michaely and Shaw (1995) use the debt ratio (debt divided by assets) as a measure of financial distress. Nixon, Roenfeldt, and Sicherman (2000) as well as Bergh and Sharp (2015) used the interest coverage ratio as a measure of financial distress. They use the interest coverage ratio as a measure of distress as they believe that a firm's ability to meet its short-term obligations is a good indicator of its financial position. As such, it was deemed appropriate to use this measure for financial distress.

Khan and Metha (1996) used the current ratio as an indirect proxy for financial leverage. The current ratio, which is current assets divided by current liabilities is used as a measure of the firm's liquidity. The current ratio is considered an appropriate measure for liquidity as it looks at the balance between what the entity expects to pay out in the next 12 months, and assets it expects to realize in the same period. It thus gives an indication of whether the firm has sufficient assets to sustain itself over the coming period.

#### **4.4.3. Taxation**

The effective tax rate is calculated as the accounting tax expense divided by the profit before taxation. Companies with lower effective tax rates will benefit less from divesting through spin-offs, as they likely have assessed or capital losses against which they can offset any proceeds from a sell off.

Prezas and Simonyan (2015) made use of marginal tax rates to compare the decision on selling off assets rather than spinning them off. Companies listed on the JSE do not have different tax rates applicable to them, hence this measurement would not be useful.

Maydew, Schippet and Vincent (1999) make use of a similar concept, being the net incremental tax, in determining the form of divestiture which will be preferred. This measurement has not been used in this paper as it is anticipated that the net incremental tax cost of choosing one form of divestiture over the other will largely be the same for companies operating in South Africa. The only difference will occur depending on whether spin-offs qualify for the nil tax treatment or not.

Firms with high effective tax rates will look to avoid paying more tax and are thus likely to avoid transactions such as sell-offs, and more likely to opt for spin-offs. Those with low effective tax rates, due to tax losses, for instance, will prefer to make use of these tax losses, and carry out sell-offs.

#### **4.4.5. BBBEE**

Divestitures that relate to a BBBEE transaction will be identified by analysing the SENS announcement. If the SENS announcement indicates that the transaction was undertaken as part of a BBBEE transaction, it will be noted as such in the data collected. The converse also applied. As this is a categorical variable, the variable will be measured using 1 to denote cases where the divestiture relates to BBBEE, and 0 otherwise.

#### **4.4.6. Director's shareholding**

The directors' shareholding is measured as a percentage, being the number of shares held by directors divided by the number of shares in issue. This is consistent with the Nixon, Roenfeldt and Sicherman (2000).

#### **4.4.7. Conclusion**

Explanatory variables follow from prior papers. Were there were deviations, these have been explained and detailed. Financial performance will be measured in

terms of ROE, being net profit divided by equity. The interest coverage ratio will be calculated as EBIT divided by the interest expense and will represent financial distress. The current ratio of the firm (current assets divided by current liabilities) will be used as a proxy for liquidity. The effective tax rate will be calculated as income tax expense divided by accounting profit and will show the impact of taxes. BBBEE transactions are identified by looking at SENS announcements. The director's shareholding is number of shares held by directors divided by total shares in issue, expressed as a percentage.

## **5. Methodology**

Logistic regression will be used to ascertain the determinants of divestiture choice, for the full period as well as the sub periods. Firstly, the reasons behind using a quantitative as opposed to a qualitative approach for testing are detailed. Then, a brief explanation of logistic regression is given in the paragraph that follows, as well as scenarios under which it can be used. Thereafter, the reasons for using logistic regression in this study are given. The equation for the full model is then given. Finally, a brief statement follows on how the regression will be run.

To ascertain the determinants of divestiture choice, a quantitative approach has been chosen. Qualitative approaches are often limited in that such an approach would typically look at a specific instance of divestiture (using case study methodology, for instance) or a smaller data set. Such an approach would therefore not allow for general conclusions to be made. A quantitative approach allows for a larger sample of items to be tested, thereby solving this issue.

Logistic regression is a form of regression analysis which is used to explain the relationship between a binary dependent variable and the independent variable or variables. The binary nature of the dependent variable means that it can only take on one of two values.

Logistic regression can be used when the following assumptions are met:

- The dependent variable must be measured on a dichotomous scale.
- There must be one or more independent variables.
- There should be independence of observations and the dependent variable should consist of mutually exclusive and exhaustive categories.



-A linear relationship should exist between continuous independent variables and the logit transformation of the dependent variable.

In this study, there are two values that the dependent variable can take on, depending on whether the divestiture is a spin-off or a sell-off. A value of 0 will be used to indicate a sell-off and 1 to indicate a spin-off, in line with Bergh and Sharp (2008), Khan and Metha (1996) and Nixon, Roenfeldt, and Sicherman (2000). Thus, the dependent variable is measured on a dichotomous scale. Spin-off and sell-off are mutually exclusive, as a specific divestiture at a point in time can only be one of these types, not both. As the sample consists only of spin-offs and sell-offs, they are also exhaustive.

There are multiple independent variables. The nature of the relationship between the independent variables and the dependent variable will be ascertained through the study. The independent variables will be the variables as stated in the hypotheses: return on equity, interest coverage ratio, current ratio, effective tax rate and whether the transaction is a BBBEE transaction. These variables will be measured as specified in section 4. The relevant data for each company is obtained from INET BFA. Data for the financial year immediately preceding divestiture has been used. This data has been used as it is publicly available information, which would have been used by management as part of their decision making process on whether to divest, as well as which divestment option to pursue.

Logistic regression is also a common feature in prior papers. Logistic regression was used by Khan and Metha (1996), Nixon, Roenfeldt, and Sicherman (2000) and Bergh and Sharp (2008). In all cases, the purpose of the study was to ascertain the determinants of divestiture choice. This further supports the conclusion that the use of logistic regression is appropriate to carry out this study.

The full model equation follows below:

$$\text{Probability (Spin-off}_t) = F(\text{D share}_{t-1}, \text{Tax}_{t-1}, \text{BBBEE}_{t-1}, \text{CR}_{t-1}, \text{IC}_{t-1}, \text{ROE}_{t-1})$$

The equation implies that the probability of divestiture through spin-off at time  $t$  is a function of the director's percentage shareholding, the effective tax rate, whether the divestiture is a BBBEE transaction, the current ratio, the interest coverage ratio and the return on equity of the firm at time  $t-1$  (the period preceding the divestiture).

The regression models will be run with the assistance of statistical software. The results from the regression will be interpreted to answer the research questions and conclude.

## 6. Results

Herein, the summary statistics as well as the results of the logistic regression run on the data set are detailed. The logistic regression is used to determine the probability of a company choosing to spin-off or sell-off to divest, over the entire period of study as well as over the pre and post financial crisis periods. Logistic diagnostic tests are in appendix 1, including test of multicollinearity and serial correlation. Findings indicate that all 3 models are valid.

### 6.1. Summary Statistics

Below follows the summary statistics for the entire period that is the focus of the study, using the divestitures over the period 1998 to 2017.

**Table 1: Summary statistics and t-tests for the spin-offs and sell-off sample over the entire period<sup>3</sup>**

Variable	Sell-Offs			Spin-Offs			Diff in Means (t-stat.)
	N	Mean	St. dev	N	Mean	St. dev	
D share	78	0.12	0.19	24	0.13	0.21	-0.01 (-.267)
Tax	78	0.15	0.33	24	-1.68	16.18	1.83 (0.997)
CR	78	4.57	8.05	24	2.84	4.99	1.73 (0.996)
IC	78	9.59	19.67	24	98.18	668.56	-88.58 (-1.169)
ROE	78	-24.06	108.16	24	57.24	231.47	-81.3 (-.2373) **

Table 1 above shows the mean values as well as standard deviations for sell-offs and spin-offs respectively for all variables other than the categorical variable, BBBEE. Results of the t-tests for equality in means are reported in parenthesis (the t statistic) with the level of significance indicated at the different levels. The mean director's shareholding percentage, D share (0.12 and 0.13) and current ratio, CR (4.57 and 2.84) are relatively similar for sell-offs and spin-offs respectively. The t-test for these factors confirms that the differences are not

<sup>3</sup> \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

statistically significant. Standard deviations (0.19 and 0.21 for D share) and (8.05 and 4.99 for CR) are also relatively similar for these factors for sell-offs and spin-offs respectively.

For the effective tax rate (Tax), there is a notable difference in standard deviation (0.33 and 16.18) for sell-offs and spin-offs, while the mean values also differ between the two divestiture types (0.15 and -1.68 respectively). It is expected that the mean tax rate for spin-offs would be higher than sell-offs, hence this finding is contrary to expectation. However, the t-test for this variable confirms that the difference in means is not statistically significant.

Both the standard deviations (19.67 and 668.56 respectively) and means (9.59 and 98.19 respectively) of the interest coverage ratio (IR) for sell-offs and spin-offs differ greatly, however, the difference in means is not significant per the t-test.

While the mean ROE for sell-offs is negative (-24.06), it is positive for spin-offs (57.24). The t-test for this factor confirms that the difference in means is statistically significant at the 5% level. There is also a smaller standard deviation in ROE for sell-offs than spin-offs (108.16 and 231.47 respectively).

**Table 2: Correlation matrix of the independent variables**

	Dshare	Tax	BBBEE	CR	IC	ROE
Dshare	1					
Tax	0.0384	1				
BBBEE	0.1099	0.0189	1			
CR	0.0224	0.0173	0.0509	1		
IC	0.0537	0.0109	-0.019	0.5931	1	
ROE	0.1694	0.0093	0.0305	0.0305	0.0238	1

The correlation matrix in table 2 allows for the assessment of the problem of multicollinearity. As all the correlation coefficients are below 0.6, multicollinearity is unlikely to be a problem.

**Table 3: Number of divestitures per type for the full period and sub periods**

Variable	Categories	Full period	Pre-crisis	Financial crisis	Post crisis
Sell-off	0	24	15	0	9
Spin-off	1	78	44	11	23

Table 3 shows the breakdown of the divestitures over the period under review. In total, 24 divestitures were undertaken as sell-offs, while 78 were spin-offs. Most of

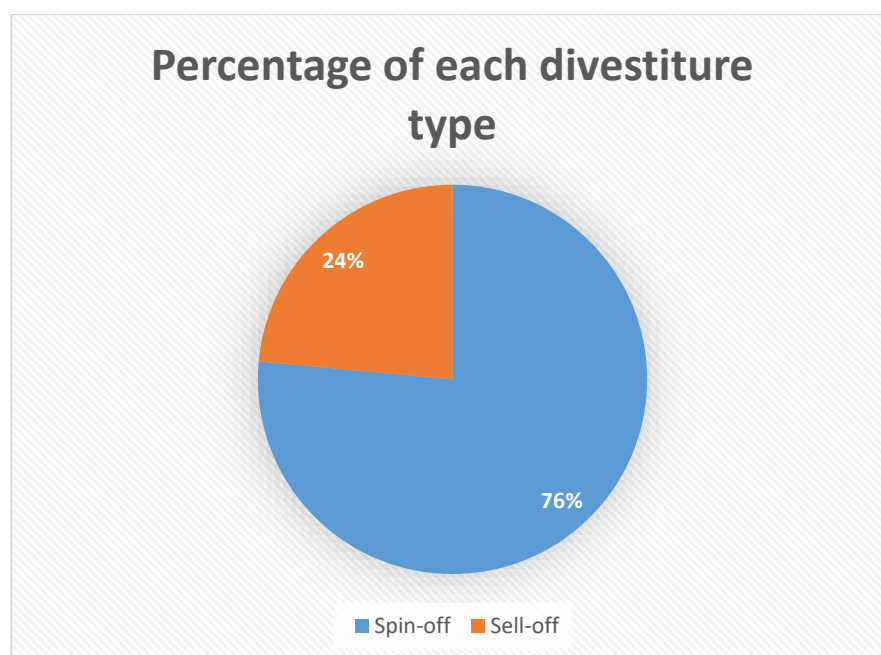
these divestitures were undertaken before the financial crisis (15 sell-offs and 44 spin-offs), with a decline in divestiture numbers noted in the periods that followed (no sell-offs and 11 spin-offs during the financial crisis and 9 sell-offs and 23 spin-offs after the financial crisis). Refer to Figures 1 to 5 for further detail on the nature of these divestitures.

**Table 4: Divestiture undertaken pursuant to a BBBEE transaction**

Variable	Categories	Frequencies	%
BBBEE	No	99	97.059
	Yes	3	2.941

Table 4 shows the cases in which divestiture was undertaken in pursuance of a BBBEE transaction. Only in 3 cases where divestitures undertaken as part of BBBEE transactions. Figure 5 provides a graphical representation of the above. The low incidence of divestitures pursuant to BBBEE transactions indicates that this factor is unlikely to be statistically significant in determining divestiture choice.

**Figure 1: The proportion of spin-offs relative to sell-offs in South Africa**



As per Figure 1 above, most of the divestitures in the sample of 102 were carried out through spin-offs. This is likely related to the fact that spin-offs can be structured in such a manner to make them tax free. As such, they are more attractive to companies from a financial perspective where they are structured in a

way that requires no cash outflow. Spin-offs can also be used as a form of dividend to shareholders, whereby no cash needs to be distributed. Many sell-offs occurred in cases where the company intend to delist, wind up or liquidate, as explored in Figure 3.

**Figure 2: Divestitures in South Africa from 1998 to 2017**

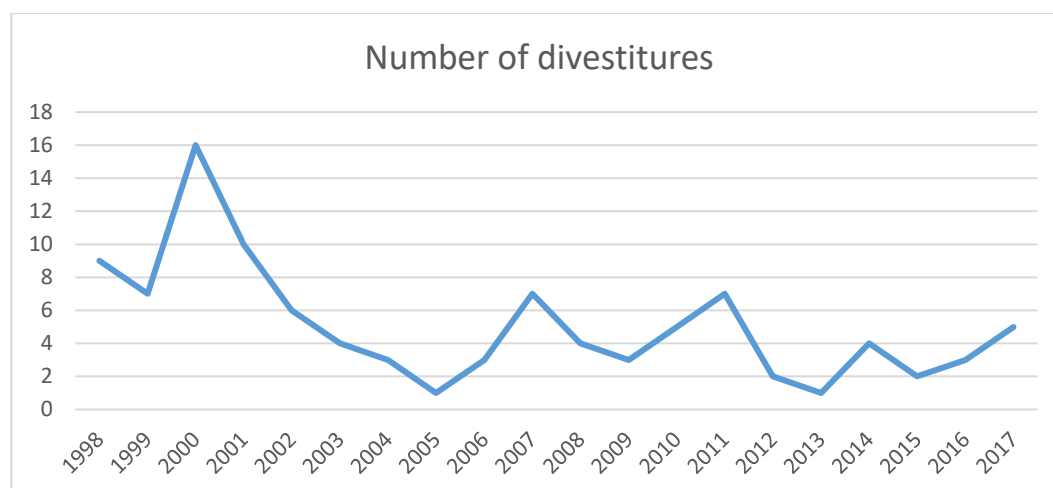
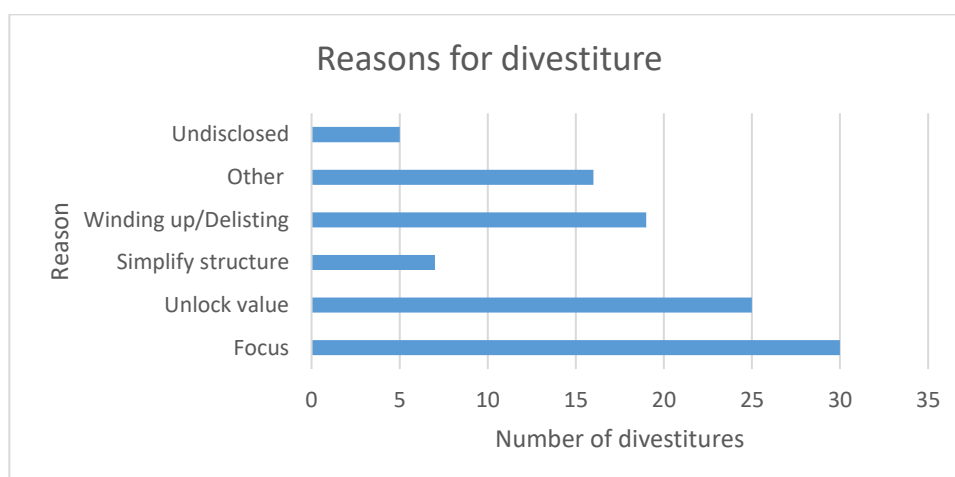


Figure 2 above shows the number of divestitures in the sample over the period that is the subject of this study. Divestiture activity was at its peak over the period 1998 to 2002, reaching its highest levels in the year 2000. Divestiture activity was high in this period as conglomerates formed during the apartheid years were dismantled. The number of divestitures then declined leading up 2005, reaching its joint lowest level. Divestiture activity rose thereafter, up to the year 2007. Over the period of the financial crisis (2007 to 2008), divestiture activity declined. Divestitures did increase thereafter, however, before falling again to match the lowest level of activity in 2013. From that point, divestiture activity has been on the rise, other than the dip seen from 2014 to 2015.

Figure 3 below shows the reasons for divestiture cited in each respective firm's SENS announcements for the sample of items. The most common reasons for divestiture include improving focus, and to realize the full market value of investments. Many divestitures were also carried out to prepare the company for a delisting or winding up. These reasons are in line with those found by prior papers. In a few instances, the reason for divestiture was not disclosed in the SENS announcement nor identified in other sources.

**Figure 3: Primary reason disclosed for divestiture**



**Figure 4: Divestitures per JSE sector**

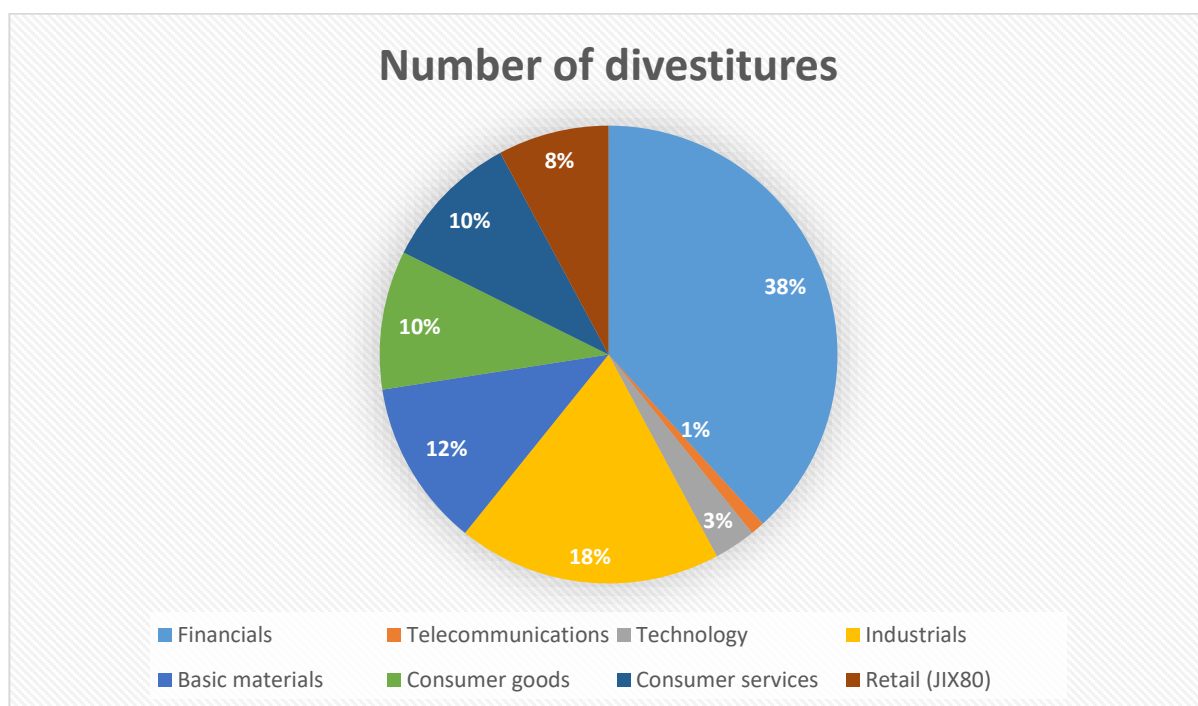
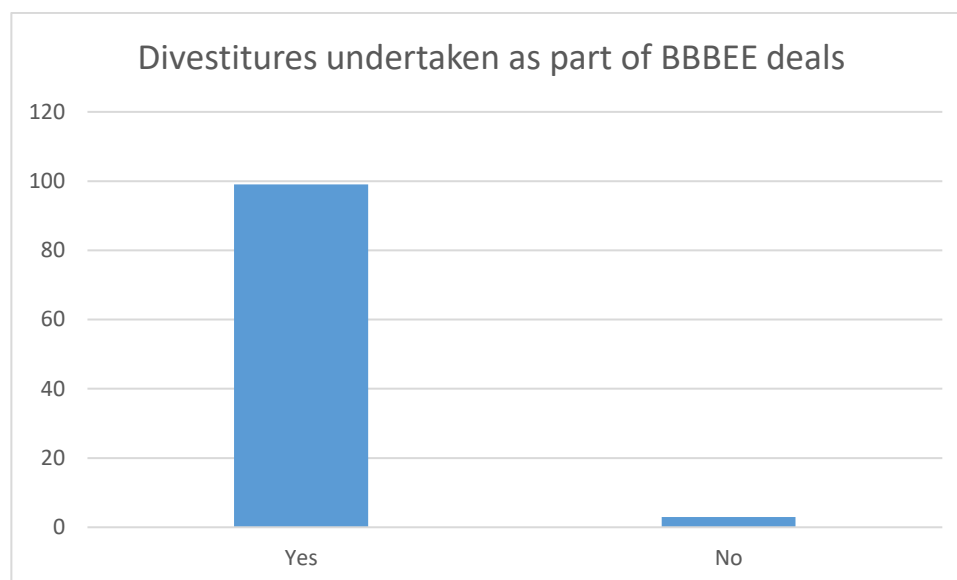


Figure 4 above shows the number of divestitures (from those in the sample) undertaken by firms in the differing JSE sectors over the period 1 January 1998 to 31 December 2017. Firms in the financial sector were responsible for a large amount of the total divestiture activity over this period. Industrials followed with the second highest number of divestitures. Companies in technology and telecommunications had the lowest levels of divestiture activity. The sector entitled 'Retail (JIX80)' is an old naming convention that was used to refer to 'Cash

companies' in the late 1990's and early 2000's. Cash companies were companies that held no significant investments and carried out no significant activities.

**Figure 5: Divestitures undertaken in the pursuit of BBBEE**



A limited number of divestitures were undertaken as part of BBBEE deals. Of the 102 divestitures identified, only 3 were undertaken as part of an empowerment transaction. All these divestitures took place before 2007, and all 3 of these deals are spin-offs.

## 6.2. Regression analysis

Table 5 below shows the results of the logistic regression which shows which factors influence the firm's choice of divestiture (spin-off or sell-off). The entire data set (1998 to 2017) and all explanatory variables are used in model 1 (Full sample), while model 2 uses the pre-crisis data, and model 3 uses post-crisis data.

**Table 5: Logistic regression output showcasing the significance of determinants of divestiture choice for the different periods<sup>4</sup>**

<sup>4</sup> \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The full model (model 1) and pre-crisis model (model 2) are both significant at the 1 percent level. The post crisis model is not significant. ROE is significant and is positively related to the spin-off decision in model 1 and 2, while it is not significant in model 3. CR is significant and is negatively related to the spin-off decision in model 1, while it is not significant in model 2 and 3. The remaining variables are not significant in any of the models.

	Full model	Pre-crisis model	Post-crisis model
Variables	1998-2017	1998-2006	2009-2017
D share	2.455 (2.150)	2.398 (1.120)	4.216 (1.316)
Tax	-0.208 (0.084)	0.348 (0.123)	-0.023 (0.019)
BBBEE	-20.230 (0.000)	-19.450 (0.000)	- -
CR	-0.212 (5.772) **	-0.341 (6.393)	0.274 (0.985)
IR	12 (1.122)	0.013 (1.299)	0.111 (1.808)
ROE	-0.010 (6.602) ***	0.014 (3.690) *	0.005 (0.468)
Constant	21.440 (0.000)	20.816 (0.000)	-0.625 (-0.516)
N	102	59	32
-2*Log L	91.407	47.000	31.101
Chi-square	19.894 ***	19.899 ***	6.923
Cox and Snell R square	0.177	0.286	0.195
Nagelkerke R square	0.267	0.422	0.280

The final equation is characterized by the below equation:

$$\text{Probability (Spin-off}_t) = F(\text{D share}_{t-1}, \text{Tax}_{t-1}, \text{BBBEE}_{t-1}, \text{CR}_{t-1}, \text{IC}_{t-1}, \text{ROE}_{t-1})$$

### 6.2.1. Interpretation of results

The results above indicate the following:

The full model (model 1), with a chi square of 19.894,  $p < 0.01$  is significant at the 1 percent level. The pre-crisis model (model 2), with a chi square of 19.899,  $p < 0.01$  is significant at the 1 percent level. The post-crisis model (model 3), with a chi square of 6.923 is not significant.

The coefficient for D share, representing management ownership is not significant in either the full model, the pre-crisis model or the post-crisis model. This means



that no significant relationship was found between the decision on which form of divestiture to undertake and the percentage of shares owned by directors, either for the entire period or any of the sub periods. This finding is not consistent with prior literature. Nixon, Roenfeldt and Sicherman (2000) find that divestiture through spin-off is more likely than sell-off the higher the percentage of shares held by directors.

The coefficient for tax, representing the effective tax rate is not significant in either the full model, the pre-crisis model or the post-crisis model. This means that no relationship was found between the decision on which form of divestiture to undertake and the effective tax rate, either for the entire period or any of the sub periods. The finding for this variable is not consistent with prior literature, as no significant statistical relationship between this variable and divestiture choice is found, although a relationship is expected. Prezas and Simonyan (2015) found that firms with higher marginal tax rates are more likely to spin-off their assets, to save on tax.

The coefficient for BBBEE is not significant in either the full model, the pre-crisis model or the post-crisis model. This means that no relationship was found between the decision on which form of divestiture to undertake and BBBEE. The finding for this variable has no precedent in prior literature. It was hypothesized that firms would more likely use spin-off than sell-off to comply with BBBEE requirements, as this would result in the BBBEE entity remaining within the same group as the divesting entity, allowing for mutually beneficial transactions to occur and for the BBBEE entity to obtain support from the divesting entity.

The coefficient for IC, representing the interest coverage ratio, is not significant in either the full model, the pre-crisis model or the post-crisis model. This means that no relationship was found between the decision on which form of divestiture to undertake and financial distress. Michaely and Shaw (1995), using the debt ratio (debt divided by assets) as a measure of financial distress and Nixon, Roenfeldt, and Sicherman (2000) as well as Bergh and Sharp (2015), using the interest coverage ratio as a measure of financial distress, all find that firms that are financially distressed are more likely to divest through sell-off rather than spin-off.

The coefficient for CR is significant at the 5 percent level in the full model but is not significant in the pre-crisis model nor the post-crisis model. CR is a measure of liquidity and is therefore linked to financial distress. The finding for this variable is not consistent with prior literature, either for the entire period or any of the sub periods, however, as the sign of the coefficient of this variable in the full model (where it is significant) indicates that sell-off is more likely the higher the current ratio, although the converse is expected, as illiquid firms should be more likely to undertake sell-off in to obtain cash to meet their obligations.

The coefficient for ROE is significant at the 1 percent level in the full model and at the 10 percent level in the pre-crisis model, with a positive coefficient in both models. ROE is, however, not significant in the post crisis model. ROE is positively related to the decision to spin-off for the full period and the pre-crisis period; or stated differently, the higher a firms ROE, the greater the likelihood of divestiture through spin-off. The finding with regards to ROE is in line with prior literature, as ROE is used as the measure for operating performance. Nixon, Roenfeldt, and Sicherman (2000), using of operating profit as a measure of performance, Michaely and Shaw (1995) and Bergh and Sharp (2015), using return on assets as a measure for performance, found that firms with superior performance are more likely to divest through spin-off rather than sell-off.

Support was found for hypothesis 1 for the full sample period as well as the pre-crisis period, while the results for hypothesis 3 were significant for the full sample period (and not for the sub periods) but the sign of the coefficient was contrary to expectation, hence hypothesis 3 was rejected. All other hypotheses (2, 4, 5 and 6) were rejected for the entire period and the sub periods. The findings indicate that firm performance is a significant factor in determining the choice of divestiture over the entire period and the pre-crisis sub period, while liquidity is a significant factor in determining the choice of divestiture over the entire period. Performance is significantly positively related to the spin-off decision, while liquidity is positively related to the sell-off decision for the aforementioned periods.

The results imply that the unique regulations and business environment in South Africa influences the determinants of divestiture choice. Differing time periods also have an impact on divestiture determinants.

## **7. Conclusion**

The aim of this research was to analyse determinants of divestiture choice in a South African context, over the period 1998 to 2017, using a sample of 102 divestitures (78 spin-offs and 24 sell-offs).

The results of the logistic regression over the full sample period (1998 to 2017) show that financial performance as measured by ROE and liquidity as measured by the current ratio are significant determinants of divestiture choice. The higher the firm's financial performance, the higher the likelihood of divestiture through spin-off. Contrary to expectation, it was found that the higher the liquidity of the firm, the higher the likelihood of divestiture through sell-off. Financial distress, director ownership, Broad Based Black Economic Empowerment (BBBEE) and effective taxation rates are not found to be significant factors in determining divestiture choice over the full sample period. Financial performance is found to be a significant determinant of divestiture choice over the pre-financial crisis period (1998 to 2006). The results for this period show that the higher the firm's financial performance, the higher the likelihood of divestiture through spin-off. The remaining factors are not found to be significant for the pre-financial crisis period. No factors were found to be significant over the post financial crisis period (2009 to 2017).

The study contributes to the literature by analysing determinants of divestiture choice in a new context, specifically the South African context. The study details how the South African context differs from the United States and why it is unique. The study also updates the literature on divestiture, by considering developments in the world of divestiture post the financial crisis. This study does not specifically test reasons for divestiture in general.

The findings in this paper imply that there is value in performing studies on firms in emerging markets, due to the unique regulations and business environment they operate in. These findings show that determinants of divestiture choice are not uniform for South Africa and the United States; nor for differing time periods in the South African context. This implies that divestiture determinants vary depending on the context and the economic cycle studied.

## **8. Recommendations for future research**

Closely related to determinants of divestiture choice in South Africa, one can study the determinants of divestiture choice in other emerging economies. These could

include neighbouring countries such as Zambia and Botswana or further afield countries such as Nigeria, to help ascertain if there are any marked differences between the reasons for divestiture in developing nations when compared to their developed counterparts.

The determinants of divestiture, in general, could be analysed in the South African context. A study of this nature would look at why entities choose to divest as opposed to not divesting, regardless of the form of divestiture undertaken.

A specific divestiture could be analysed using a case study approach. For instance, research could be done on the recent unbundling of Prosus by Naspers. This study could look at motivations behind the divestiture and the impact of the divestiture on shareholder wealth.

## Appendix 1

### Logistic Diagnostic tests

#### Multicollinearity

VIF value are used as a further test to identify the presence of multicollinearity and complement the correlation matrix in table 2. Generally variable with VIF values that exceed 2 will require further investigation.

Table A1: VIF values of Model 1

Variable	VIF	1/VIF
IC	1.55	0.644
CR	1.55	0.644
Dshare	1.05	0.952
ROE	1.04	0.964
BBBEE	1.02	0.982
Tax	1	0.997
Mean VIF	1.2	

All the VIF values for model 1 are less than 2 as shown in table A1

Table A2: VIF values of Model 2

Variable	VIF	1/VIF
CR	1.74	0.575
IC	1.69	0.592
Tax	1.08	0.924
Dshare	1.06	0.945
ROE	1.04	0.961
BBBEE	1.03	0.975
Mean VIF	1.27	

All the VIF values for model 2 are less than 2 as shown in table A2

Table A3: VIF values of Model 3

Variable	VIF	1/VIF
CR	1.62	0.616
ROE	1.47	0.679
IC	1.34	0.748
Tax	1.23	0.815
Dshare	1.04	0.965
Mean VIF	1.34	

All the VIF values for model 3 are less than 2 as shown in table A3.

On the whole multicollinearity does not appear to be a problem for any of the models.

#### Influential Value

The models are checked for influential values that include potential outliers. This is done by visualising the residual errors that lie outside Cook's distance.

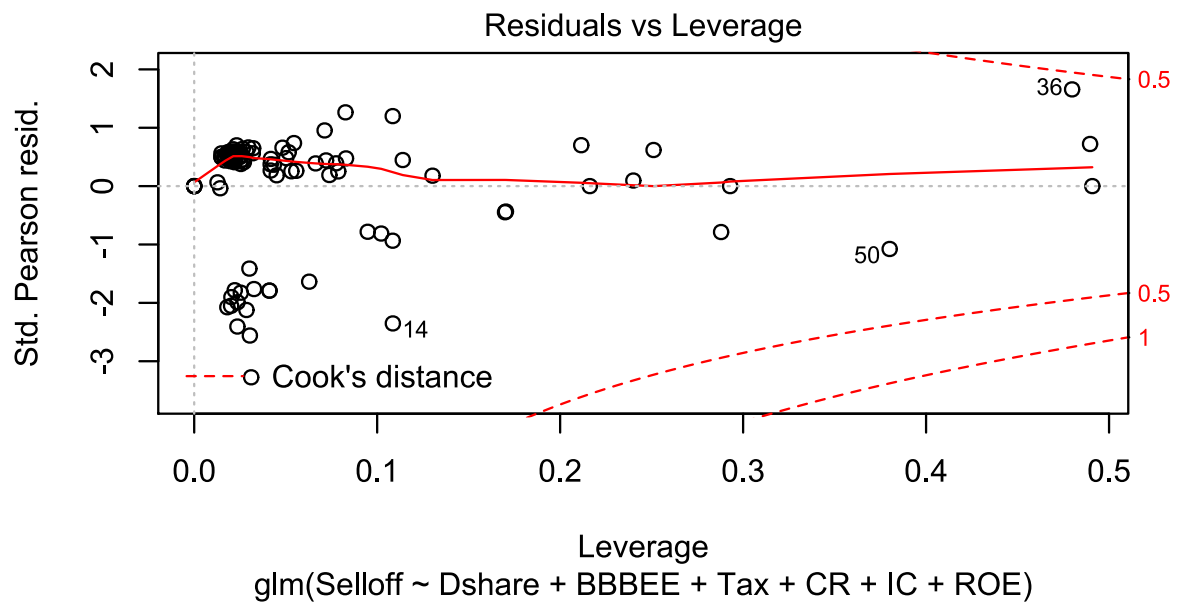


Figure A1: Model 1's Spread-Location plot

All the observations in Model 1, as show in figure A1, lie within Cook's distance meaning that there are no highly influential values.

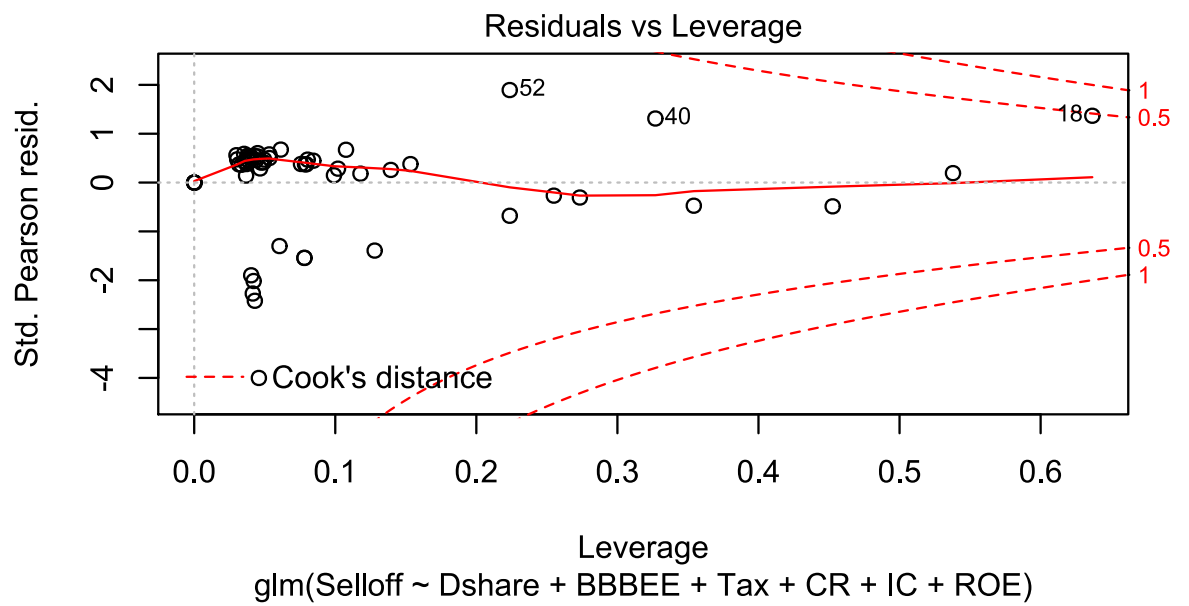


Figure A2: Model 2's Spread-Location plot

All the observations in Model 2, as show in figure A2, lie within Cook's distance meaning that there are no highly influential values.

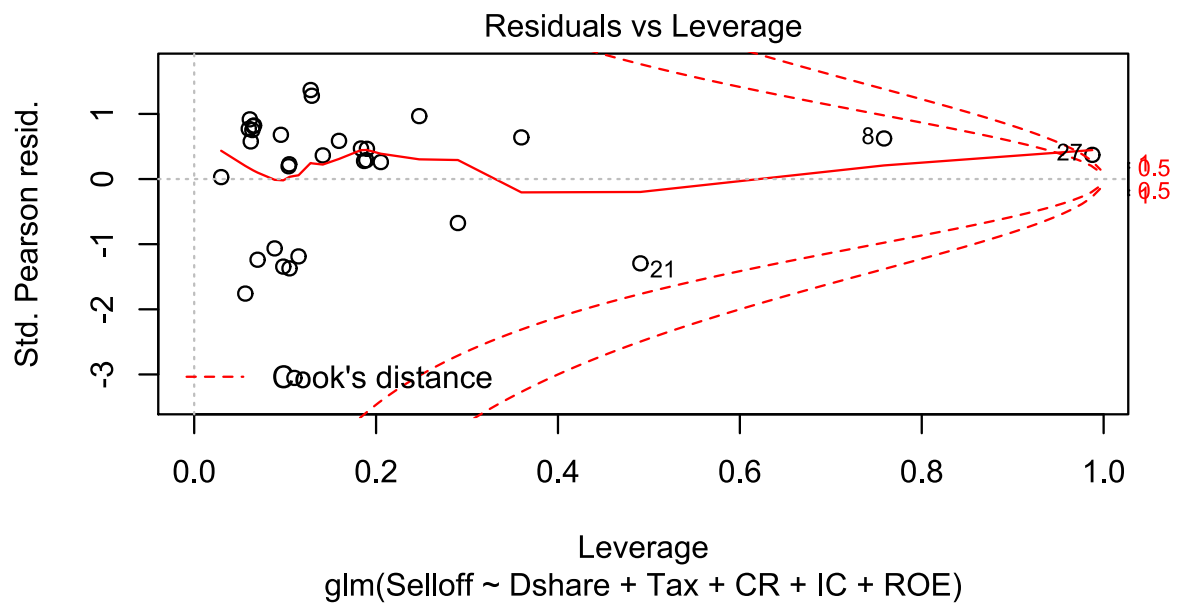


Figure A3: Model 3's Spread-Location plot

Observation number 27 lies outside Cook's distance meaning that it is influential. Its effect on the regression will be examined in table A4.

Table A4: Model 3 regression results showing the effect of removing the influential variable.

VARIABLES	Model 3	Model 3 without obs 27
Dshare	4.216 (3.675)	3.884 (3.650)
Tax	-0.0234 (0.169)	0.534 (1.525)
CR	0.274 (0.276)	0.274 (0.273)
IC	0.111 (0.0829)	0.104 (0.0843)
ROE	0.00490 (0.00716)	0.00503 (0.00758)
Constant	-0.625 (0.869)	-0.658 (0.871)
Observations	32	31
-2*Log L	31.101	30.962
Nagelkerke R square	0.280	0.266
Chi2	6.923	6.390

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



Dropping the influential value (observation number 27 of the regression) has no significant impact on the model. Overall, the model remains insignificant with a Chi squared statistic that is not valid at the 10% level.

#### Serial correlation

In order to test for correlated residuals, the study will make use of the Durbin Watson (DW) test.

Table A5: Durbin Watson test results of Models 1-3

	Model 1	Model 2	Model 3
DW statistic	1.752	1.904	1.399
p-value	0.21	0.712	0.142

From the results of the DW test in table A5, it is evident that we can reject the null hypothesis that the errors are correlated.

Based on the diagnostic tests, it is evident that the three models are valid.

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